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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,765	02/07/2002	Brian Huppi	APL1P213/P2662	2916
22434	7590	03/08/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			OSORIO, RICARDO	
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OAKLAND, CA 94612-0250			2673	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,765

Applicant(s)

HUPPI, BRIAN

Examiner

RICARDO L OSORIO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,8,11-29,31-35,37,38 and 41-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,8,11-29,31-33,37-38 and 41-43 and 53-60 is/are rejected.
- 7) ☒ Claim(s) 34,35 and 44-52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8, 11-17, 20-29, 31, 37-38, 41-43, 56 and 58 are rejected under 35

U.S.C. 102(b) as being anticipated by Rosenberg et al (WO 99/49443).

Regarding claim 1, Rosenberg teaches of a computer mouse (Fig. 1, reference character 12 and Fig. 2, reference character 32) comprising a housing (Fig. 1, outside cover of mouse) and a rotary dial positioned relative to an external surface of the housing (Fig. 1, reference character 16, Fig. 3A, reference character 54, abstract, lines 1-2, page 16, lines 1-4 and page 20, line 37- page 21, line 2), the housing providing a platform for sliding the mouse along a surface in order to move a cursor or pointer on a display screen of a computer system (see Fig. 1), the rotary dial rotating around an axis in order to implement a control function (page 16, line 6) in the computer system, the rotary dial rotating within a plane that is substantially parallel to the external surface of the housing (page 16, lines 1-3), the rotary dial having an engageable face for allowing a user to facilitate rotation of the rotary dial, the engageable face being completely exposed to the user (Fig. 3A, reference character 54. Note that top face is engageable and completely exposed).

Regarding claim 2, Rosenberg teaches of the control function being associated with performing an action on the display screen (page 10, lines 26-28).

Regarding claim 3, Rosenberg teaches of the control function corresponding to a scrolling feature (page 10, line 28).

Regarding claim 4, Rosenberg teaches that the control function is used to control various applications associated with a computer system (page 2, lines 18 and 19).

Regarding claim 8, Rosenberg teaches that the engageable face is substantially parallel to the external surface of the housing (Figs. 3A, reference character 54. See top face).

Regarding claim 11, Rosenberg teaches that the rotary dial is tangentially accessible to a user from the entire circumference of the rotary dial (Figs. 3A, reference character 54. The user can access the rotary dial from all sides of its circumference).

Regarding claim 12, Rosenberg teaches of a mouse for moving a cursor or pointer on a display screen (page 24, lines 17-18) comprising: a mouse housing (Fig. 1, outside cover of mouse); and a disk coupled to the mouse housing (Fig. 1, reference character 16, Fig. 3A, reference character 54, abstract, lines 1-2, page 16, lines 1-4 and page 20, line 37-page 21, line 2), and rotatable about an axis (page 16, line 2), the disk being configured to facilitate a control function on the display screen (Fig. 3A, reference character 54, and page 16, lines 1-6), the disk having a touchable surface for rotating the disk about the axis (Fig. 3A, reference character 54. See top surface), the touchable surface being completely accessible to a finger of the user such that the disk can be continuously rotated by a simple swirling motion of the finger (Fig. 3A, reference character 54 and page 16, lines 1-3. Note that top face can be continuously rotated by swirling motion of finger).

Regarding claim 13, Rosenberg teaches that the control function is associated with performing an action on the display screen (page 10, lines 26-28).

Regarding claim 14, Rosenberg teaches that the control function corresponds to a scrolling feature (page 10, line 28).

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Regarding claim 15, Rosenberg teaches that the scrolling feature allows a user to move displayed data across a viewing area on the display screen so that a new set of displayed data is brought into view in the viewing area (page 2, lines 16-17 and page 27, lines 1-2).

Regarding claim 16, Rosenberg teaches that the rotation of the rotary disk causes the displayed data to move across the viewing area of the display screen (page 2, lines 16-17 and page 27, lines 1-2).

Regarding claim 17, Rosenberg teaches that the displayed data is moved vertically or horizontally on the display screen (page 2, lines 16-17, page 10, lines 30-34 and page 27, lines 1-2).

Regarding claim 20, Rosenberg teaches of a computer mouse (Fig. 1, reference character 12 and Fig. 2, reference character 32) comprising: a mouse housing that provides a structure for moving the computer mouse along a surface and for gripping the mouse for movement thereof (see Fig. 1); a position detection mechanism operatively supported by the mouse housing, the position detection mechanism being configured for tracking the position of the mouse as its moved along the surface (page 24, lines 17-18); a disk positioned relative to an external surface of the mouse housing (Fig. 1, reference character 16) the disk being rotatably coupled to the mouse housing about an axis that is normal to the external surface of the mouse housing (Fig. 3A, reference character 54, page 16, lines 1-4 and page 20, line 37-page 21, line 2), and the having a user input receiving surface for facilitating movements thereof about the axis (Fig. 1, reference character 16 and Fig. 3A, reference character 54, both have a surface accessible by the user for movement); and an encoder for monitoring the rotation of the disk (page 21, lines 4-5).

Regarding claim 21, Rosenberg teaches that a substantial portion of the surface is exposed outside of the housing (see Fig. 3B, reference character 68. Note that the wheel has a substantial portion its surface outside the housing).

Regarding claim 22, Rosenberg teaches that the surface is completely accessible to a finger of the user (see Fig. 3A, reference character 54. Note that the top face is completely accessible to a user's finger).

Regarding claim 23, Rosenberg teaches that the disk is configured to facilitate a control function on the display screen (Fig. 3A, reference character 54, and page 16, lines 1-6).

Regarding claim 24, Rosenberg teaches that the control function corresponds to a scrolling feature (page 10, line 28).

Regarding claim 25, Rosenberg teaches that the surface corresponds to the top of the mouse housing (Fig. 1, reference character 16 and page 10, lines 19-20).

Regarding claim 26, Rosenberg teaches that the external surface corresponds to the side of the mouse housing (page 10, lines 20-21. Note that in a mouse such as the one in Fig. 1, the thumb rests or is normally placed relative to the side of the mouse body).

Regarding claim 27, Rosenberg teaches that the surface of the disk is substantially flush with a top external surface of the mouse housing (see Fig. 1, reference character 16. Note that the disk is substantially flush with the surface of the mouse body).

Regarding claim 28, Rosenberg teaches that the plane of rotation of the disk is parallel to a top external surface of the body (page 16, lines 1-3).

Regarding claim 29, Rosenberg teaches of the disk including tactile elements for increasing the feel of the disk (page 10, lines 23-24) the tactile elements are bumps extending

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from the user input receiving surface or voids representing removed sections of the surface (page 10, lines 23-24); the user input receiving surface is substantially perpendicular to the axis (page 16, lines 1-3). Both top and side surfaces are considered user input receiving surfaces since the user can move the knob both touching the side surface or touching the top surface.

Regarding claim 31, Rosenberg teaches that the encoder is an optical encoder (page 21, lines 3-13).

Regarding claim 37, Rosenberg teaches of a button, or click button, for allowing the user to make a selection on the display (Fig. 1, reference character 15, and page 10, lines 17-18).

Regarding claim 38, see claim 27, above.

Regarding claim 41, Rosenberg teaches that the disk is configured to sit in mouse housing (see Fig. 1, reference character 16).

Regarding claim 42, Rosenberg teaches that the top surface of the disk is level with the external surface of the mouse housing (see Fig 1, reference character 16).

Regarding claim 56, Rosenberg teaches that the encoder is a mechanical encoder (see page 21, lines 3-13).

Regarding claim 58, further, Rosenberg teaches that the top surface of the disk extends above the external surface of the mouse housing (see Fig. 3, reference character 54).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (see above) in view of McLoone et al (US 2002/0158844).

Regarding claim 18, Rosenberg teaches that the wheel, or disk, can be used for scrolling a document in a window (page 10, lines 27-28).

However, Rosenberg fails to teach that side to side manipulation of the disk corresponds to horizontal scrolling, and that forwards and backwards manipulation of the disk corresponds to vertical scrolling.

McLoone teaches of a mouse having a scroll wheel, or disk (Fig. 1, reference character 30) wherein side to side manipulation of the disk corresponds to horizontal scrolling (page 4, paragraph 37, lines 1-21), and wherein forwards and backwards manipulation of the disk corresponds to vertical scrolling (page 3, paragraph 36, lines 1-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the side to side, as well as the forwards and backwards manipulation of the disk for the purpose of scrolling both vertically and horizontally, as taught by McLoone, in the device of Rosenberg because it makes it easy for a user to scroll an image both horizontally and vertically relative to the display screen without needing to reposition the peripheral device or repositioning the hand on the device (See McLoone, page 2, paragraph 9, lines 8-12 and paragraph 11, lines 1-8).

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5. Claims 19, 32, 33, 53, 59 and 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (see above) in view of JUSTY UMN-10 (Justy "Buttonless" Scroll Mouse, 10/10/2001, hereafter "Justy").

Regarding claims 19, 32, 33, 53, 55, 59 and 60 Rosenberg teaches that the mouse housing provides a pressing, or clicking action normal to the mouse housing for performing an action on the display screen (page 10, lines 17-18). Also, further, Rosenberg teaches of the disk seated in the front portion of the mouse housing (Fig. 1, reference character 16, Fig. 3A, reference character 54, page 16, lines 1-4 and page 20, line 37-page 21, line 2. The mouse wheel can be substituted by the disk or knob)

However, Rosenberg fails to teach of the mouse housing serving as a button of the computer mouse, with no separate mechanical buttons disposed thereon in any portion of the mouse housing, wherein clicking is actuated in a direction normal to the mouse housing.

Justy teaches of a mouse housing serving as a button of the computer mouse, with no separate mechanical buttons disposed thereon in any portion of the mouse housing, wherein clicking is actuated in a direction normal to the mouse housing (see Justy, second paragraph, lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the mouse housing serving as a button, as taught in Justy, in the device of Rosenberg to avoid unintentional clicking of conventional mouse buttons when trying to have a good grip of the mouse body.

6. Claims 43 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (see above) in view of applicant's admitted prior art (hereafter, APA).

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Regarding claims 43 and 54, Rosenberg teaches the disk attached to a shaft (Fig. 5, reference character 128) that rotates within a shaft housing attached to the mouse housing (page 23, lines 1-15). The optical encoder (page 21, line 5) includes all the typical members of a mouse wheel encoder.

However, Rosenberg does not precisely teach the following typical members of a mouse wheel encoder: a light source, a light sensor and an optical encoding disc having a plurality of slots separated by openings therebetween, the slots and openings breaking the beam of light coming from the light source so as to produce pulses of light that are picked up by the light sensor, the optical encoding disk being an integral part of the disc or a separate portion that is attached to the shaft, and a plurality of detents that provide tactile feedback that informs the user when the disk has reached a certain position.

APA teaches of a light source, a light sensor and an optical encoding disc having a plurality of slots separated by openings therebetween, the slots and openings breaking the beam of light coming from the light source so as to produce pulses of light that are picked up by the light sensor, the optical encoding disk being an integral part of the disc or a separate portion that is attached to the shaft (page 16, lines 6-9, and page 17, lines 9-34), and a plurality of detents that provide tactile feedback that informs the user when the disk has reached a certain position (page 18, lines 1-3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the typical members of an optical encoder, as taught by APA, in the device of Rosenberg, because optical encoders are well known in the art of mouse encoders, and because it

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is generally believed that optical encoders give the user more control over the resolution, i.e., how many counts per rotation (page 16, lines 28-29).

7. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (see above) in view of Brink (US2003/0098851).

Regarding claim 57, Rosenberg does not precisely teach of the top surface of the disk being recessed below the external surface of the mouse housing.

Brink teaches of the top surface of the disk being recessed below the external surface of the mouse housing (see Fig. 3, reference character 16 and paragraph 32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the disk below the external surface to avoid inadvertent touching of the wheel that may result in undesired user input action.

Allowable Subject Matter

8. Claims 34-35 and 44-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claims 34-35 and 44-52 are allowable since certain key features of the claimed invention are not taught or fairly suggested by the prior art. Claim 34, “the plane of rotation of the disk being substantially orthogonal to the direction of the clicking action”. Claim 44, “the rotary dial moving with the button body when it is moved relative to the base”. The closest prior art Rosenberg et al (WO 99/49443) and Serpa (US 2002/0154094) teach of a mouse with a rotary

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dial, however singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Response to Arguments

9. Applicant's arguments with respect to claims 1-4, 8, 11-29, 31-35, 37-38 & 41-43 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that while Rosenberg may state that the control knob 54 can be oriented similarly to the mouse wheel 16, he does not teach or suggest a mouse wheel 16 that can be oriented similarly to the knob 54.

Examiner disagrees Rosenberg teaches that, alternately, the knob 54 of the remote control can be oriented similar to the mouse wheel (16) (see page 16, lines 1-4); then, Rosenberg teaches that the user object 32 is preferably a mouse but can alternately be a joystick, **remote control**, or other device or article (page 20, line 37-page 21, line 2). Thus, Rosenberg teaches a remote control with a knob that can have, alternately a mouse wheel, and then teaches that the mouse can be a remote control. This clearly teaches a mouse with a knob, or rotary dial. Furthermore, Rosenberg teaches in the abstract, in lines 1-2, **"a force feedback wheel, or knob is provided on a mouse, or other device"** This even more clearly teaches a mouse with a knob, or rotary dial.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is 703 305-2248.

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The examiner can normally be reached on Monday through Thursday from 7:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala whose telephone number is 703 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

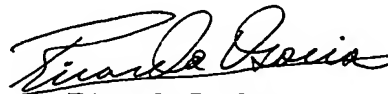
Washington, D.C. 20231

or faxed to:

703 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Ricardo L. Osorio
Examiner
Art Unit: 2673

RLO
February 1, 2005